# VII. 510(k) Summary

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In accordance with the Safe Medical Devices Act (SMDA) of 1990 and Title of the Code of Federal Regulations Part 807 (21 CFR §807), and in particular §807.92, the following summary of safety and effectiveness information is provided:

MAR 0 4 2003

# A. Submitted by

Laetitia Bernard Manager of Regulatory Affairs and Quality Assurance NuVasive<sup>®</sup>, Incorporated 10065 Old Grove Road San Diego, CA 92131 Telephone: (858) 527-1918

Date Prepared: October 3, 2002.

#### B. Device Name

Trade or Proprietary Name: NuVasive® Mesh

Common or Usual Name: Vertebral Body Replacement Device Classification Name: Vertebral Body Replacement Device

### C. Predicate Devices

The subject device is substantially equivalent to similar previously cleared devices.

# D. Device Description

The *NuVasive*<sup>®</sup> *Mesh* is an implantable titanium vertebral body replacement device indicated for use in the thoracic and lumbar spine (i.e., T1 to L5) to replace a diseased vertebral body resected or excised for the treatment of tumors, to achieve anterior decompression of the spinal cord and neural tissues, and to restore the height of a collapsed vertebral body.

A plurality of rhombic pattern holes are built in the wall, transverse to the longitudinal axis. The hollow core allows for packing of bone grafting materials to help promote a solid fusion. A ring of small spikes or teeth on each end of the device serves to grip the endplates of the adjacent vertebrae to resist expulsion.

The device is available in a variety of different shapes and sizes to suit the individual pathology and anatomical conditions of the patient.

### E. Intended Use

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The NuVasive<sup>®</sup> Mesh is a vertebral body replacement device indicated for use in the thoracolumbar spine (T1 to L5) to replace a diseased or damaged vertebral body caused by tumor or fracture, to restore height of a collapsed vertebral body, and to achieve decompression of the spinal cord and neural tissues. The NuVasive<sup>®</sup> Mesh is intended to be used with supplemental internal spinal fixation systems that are cleared by the FDA for use in the thoracic and lumbar spine. Allograft or autograft material may be used at the surgeon's discretion.

## F. Comparison to Predicate Devices

As was established in this submission, the subject device is substantially equivalent to other devices cleared by the agency for commercial distribution in the United States.

Engineering drawings, labeling, and mechanical testing have demonstrated that the subject device is substantially equivalent, if not identical, to its predicate devices in terms of design, materials of composition, indications for use, and such other characteristics as may be associated with the manufacture of any medical device.

# G. Summary of Non-Clinical Tests

Mechanical testing was presented.

## H. Summary of Clinical Tests

(Not Applicable).



Food and Drug Administration 9200 Corporate Boulevard Rockville MD 20850

# MAR 0 4 2003

Ms. Laetitia Bernard Manager of Regulatory Affairs and Quality Assurance NuVasive, Inc. 10065 Old Grove Road, Suite A San Diego, CA 92131

Re: K023319

Trade/Device Name: NuVasive Mesh Regulation Number: 21 CFR 888.3060

Regulation Name: Vertebral body replacement device

Regulatory Class: II Product Code: MQP Dated: January 3, 2003 Received: January 6, 2003

Dear Ms. Bernard:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

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This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (301) 594-4659. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <a href="http://www.fda.gov/cdrh/dsma/dsmamain.html">http://www.fda.gov/cdrh/dsma/dsmamain.html</a>

Sincerely yours,

Celia M. Witten, Ph.D., M.D.

Mark M. Milkerson

Director

Division of General, Restorative and Neurological Devices Office of Device Evaluation Center for Devices and Radiological Health

Enclosure

v.	Dra	aft Labeling	Page 1 of 1	
	<b>A.</b> .	Indications for Use		
		510(k) Number (if known): K023319		
		Device Name: <u>NuVasive<sup>®</sup> Mesh</u>		
		Indications for Use:		
		The NuVasive <sup>®</sup> Mesh is a vertebral body replacement device indicated thoracolumbar spine (T1 to L5) to replace a diseased or damaged vertel tumor or fracture, to restore height of a collapsed vertebral body, and to of the spinal cord and neural tissues. The NuVasive <sup>®</sup> Mesh is intended supplemental internal spinal fixation systems that are cleared by the FD and lumbar spine. Allograft or autograft material may be used at the supplemental internal spinal fixation systems that are cleared by the FD and lumbar spine.	oral body caused by achieve decompression to be used with OA for use in the thoracic	
		Concurrence of CDRH, Office of Device Evaluation (ODE)		
		Prescription Use OR Over-The-Counter Use Or Over-The-C		

19(k) Number K0233/9